On page 8, prior to the paragraph beginning on line 24, kindly add the following new paragraph:

B2

-- Fig. 5B is a schematic, sectional view of a system combining a cleaning module with a particle detection unit, in accordance with a preferred embodiment of the present invention; --

Please replace the paragraph beginning at page 12, line 1, with the following rewritten paragraph:

B3

-- Fig. 4 is a schematic, sectional view of cleaning module 10, showing further details of its construction, in accordance with a preferred embodiment of the present invention. Substrate 30 is preferably held on chuck 25 by a suction mechanism 125. Preferably, a coolant channel 120 conveys a coolant 122, such as water, to chuck 25 in order to cool substrate 30, and thus to prevent thermal damage. Arm 40 conveys laser beam 75 to impinge on substrate 30, and also comprises a vapor inlet 130. Suction channel 95 is connected to a suction gas outlet 135. Rotation of chuck 25 is controlled by a motor 140. Although module 10 is shown here as an independent unit, in an alternative embodiment of the preferred embodiment, arm 40 is incorporated in an existing process chamber or metrology tool and makes use of a rotating chuck or X-Y stage that is already present in the system. --

Please replace the paragraph beginning at page 12, line 15, with the following rewritten paragraph:

B4

-- Fig. 5A is a schematic, sectional view of cleaning module 20, in accordance with another preferred embodiment of the present invention. In this embodiment, wafer 30 is mounted on an x-y stage or platform 111. Cleaning arm 40 may rotate about the ϕ axis, or it may be fixed, since the x-y stage allows the laser beam to reach all areas of the wafer surface without the necessity of scanning the laser beam, as well. The configuration of Fig. 5A is useful in the context of particle detection tools, which commonly include an x-y stage already. A system combining the cleaning module of Fig. 5A with a particle detection unit 145 is shown in Fig. 5B. --

Please replace the paragraph beginning at page 12, line 28, with the following rewritten paragraph:

B5

-- Fig. 6 is a graph 150 showing a water absorption spectrum as a function of the wavelength of the incident radiation, useful in understanding aspects of the present invention. In order to achieve high absorption of the laser beam in a water film deposited on wafer 30, wavelengths of 10.6 μm and 2.95 μm are preferred, as they are points of strong absorption. The 2.95 μm absorption, indicated in the figure by an arrow 155, is more than one order of magnitude stronger than absorption at 10.6 μm, indicated in the figure by an arrow 160. Preferably, laser module 60 is designed to generate a tuned, pulsed laser beam at wavelengths that are tailored according to the particular particle removal application, including both vapor-assisted and dry methods. Different process stages and contaminant types typically require different methods and different wavelengths for optimal cleaning. Thus, module 60 is preferably able to generate both ultraviolet and infrared (IR) radiation, which is most preferably tunable to the water absorption peak at 2.95 μm. --

Please replace the paragraph beginning at page 13, line 13, with the following ~~rewritten paragraph:~~

B6

-- Fig. 7 is a simplified block diagram illustrating elements of multi-wavelength laser module 60, constructed and operative in accordance with a preferred embodiment of the present invention. A Nd:YAG laser source 170 emits a laser beam at 1.06 μm, which is directed into an optical parametric oscillator (OPO) 180. The OPO down-converts the laser frequency so as to emit a beam in the mid-IR, at one of the wavelengths at which water has an absorption peak, as shown in Fig. 6. Alternatively, a pulsed CO_2 laser (10.6 μm wavelength) can be used instead of the OPO. Beam shaping optics 190 direct the IR beam into a radiation guide 200, which then carries the beam to arm 40. Preferably, module 60 also includes an ultraviolet (UV) laser, such as a Lambda Physik (Gottingen, Germany) LPX315 IMC excimer laser. The UV laser is highly efficient for cleaning bare silicon, while OPO 180 can generate radiation in the strong absorption region of water (2.95 μm) such that "explosive evaporation" conditions are reached and efficient particle cleaning achieved when UV cleaning is ineffective or unsatisfactory for other reasons. Alternatively, an Er:YAG laser may be employed. --